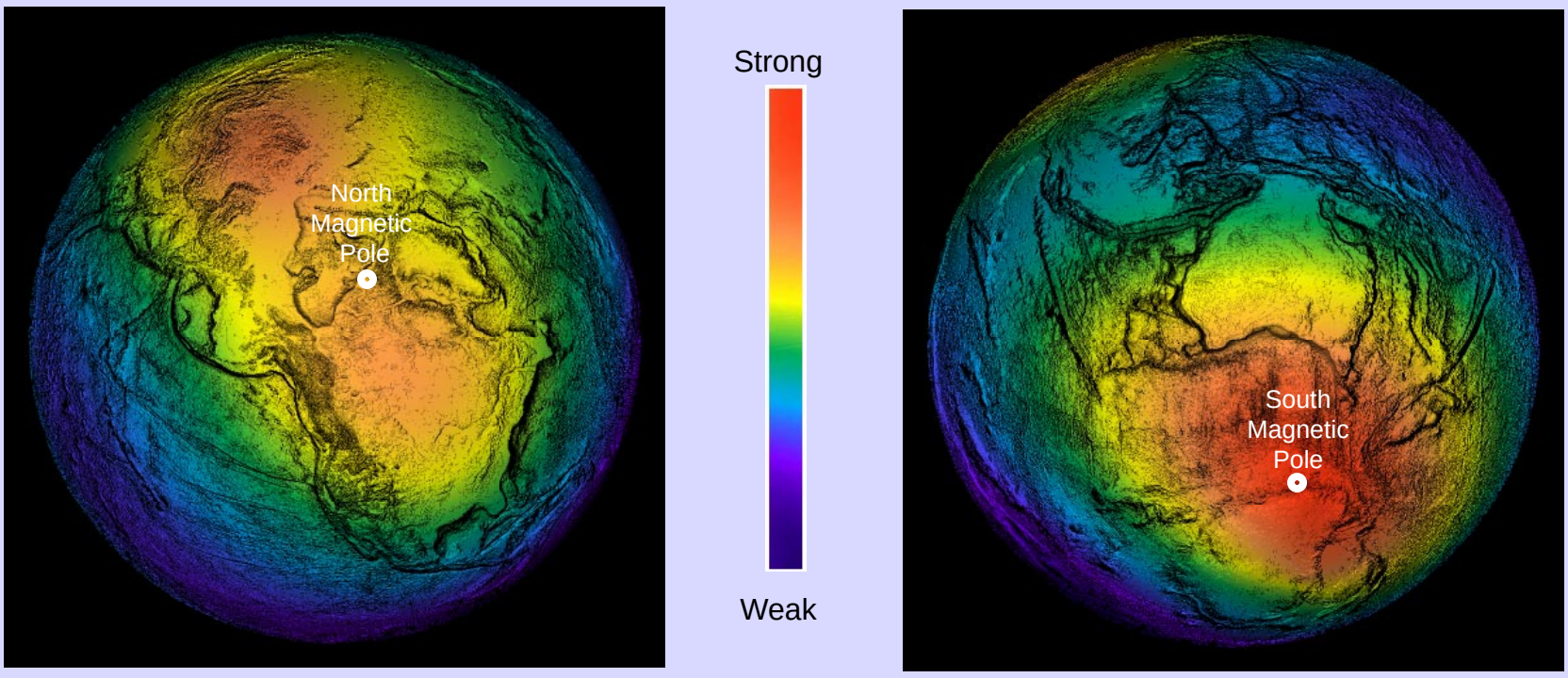
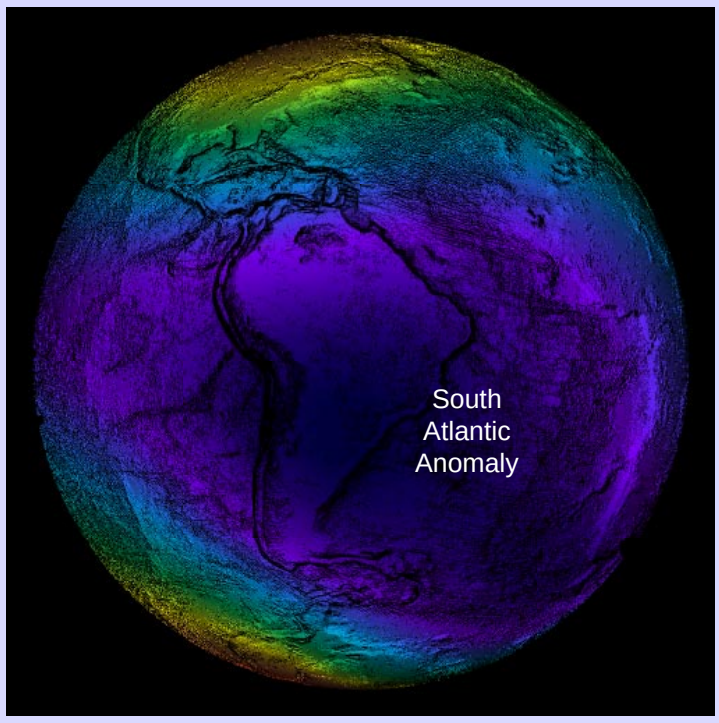
United States Department of Commerce, National Oceanic and Atmospheric Administration
National Environmental Satellite, Data, and Information Service

National Geophysical Data Center (NGDC)

Images of the Earth's magnetic field for 2002

The images below are based on data available at http://www.ngdc.noaa.gov/cgi-bin/seg/gmag/igrfpg.pl





Images of the Earth's magnetic field for 2002
Based on the International Geomagnetic Reference Field, Epoch 2000

The Earth's magnetic field varies with both time and location. By constantly measuring the magnetic field, we can observe how the field is changing over a period of years. Knowledge of the past, present, and near-future magnetic field is essential for many commercial and military endeavors.

Earth's magnetic field is actually a composite of several magnetic fields generated by a variety of sources. The most important of these geomagnetic sources are:

a. Earth's conducting, fluid outer core;
b. Earth's crust/upper mantle;
c. the ionosphere; and
d. the magnetosphere.

More than 90% of the geomagnetic field is generated by the Earth's outer core. The International Geomagnetic Reference Field (IGRF), a series of mathematical models, represents this main magnetic field and its secular variation. The IGRF is produced by the International Association of Geomagnetism and Aeronomy (IAGA), Working Group V-8, Analysis of the Global and Regional Geomagnetic Field and its Secular Variation.

May 2002

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19	20	21	22	23	24	25
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April

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21	22	23	24	25	26	27
28	29	30				

June

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30						

S M T W T F S

Underlying scientific data viewable at: **http://www.ngdc.noaa.gov/ngdc.html**